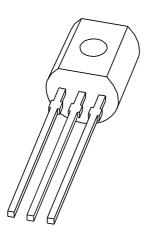
DISCRETE SEMICONDUCTORS

DATA SHEET



MPSA92 PNP high-voltage transistor

Product specification Supersedes data of 1999 Apr 27 2001 Dec 07





PNP high-voltage transistor

MPSA92

FEATURES

• Low current (max. 100 mA)

• High voltage (max. 300 V).

APPLICATIONS

• General purpose switching and amplification.

DESCRIPTION

PNP high-voltage transistor in a TO-92; SOT54 plastic package. NPN complement: MPSA42.

PINNING

PIN	DESCRIPTION
1	collector
2	base
3	emitter

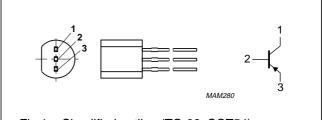


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	_	-300	V
V _{CEO}	collector-emitter voltage	open base	_	-300	V
V_{EBO}	emitter-base voltage	open collector	_	- 5	V
I _C	collector current (DC)		_	-100	mA
I _{CM}	peak collector current		_	-200	mA
I _{BM}	peak base current		_	-100	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C	_	625	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		_	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	200	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

 $T_j = 25$ °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I _{CBO}	collector cut-off current	I _E = 0; V _{CB} = -200 V	_	-250	nA
I _{EBO}	emitter cut-off current	$I_C = 0; V_{BE} = -3 \text{ V}$	_	-100	nA
h _{FE}	DC current gain	V _{CE} = -10 V; note 1			
		$I_C = -1 \text{ mA}$	25	_	
		$I_{\rm C} = -10 \text{mA}$	40	_	
		$I_C = -30 \text{ mA}$	25	_	
V _{CEsat}	collector-emitter saturation voltage	$I_C = -20 \text{ mA}$; $I_B = -2 \text{ mA}$; note 1	_	-500	mV
V _{BEsat}	base-emitter saturation voltage	$I_C = -20 \text{ mA}; I_B = -2 \text{ mA}; \text{ note 1}$	_	-900	mV
C _c	collector capacitance	$I_E = i_e = 0$; $V_{CB} = -20 \text{ V}$; $f = 1 \text{ MHz}$	_	6	pF
f _T	transition frequency	$I_C = -10 \text{ mA}; V_{CE} = -20 \text{ V};$ f = 100 MHz	50	_	MHz

Note

1. Pulse test: $t_p \le 300~\mu s;~\delta \le 0.02.$

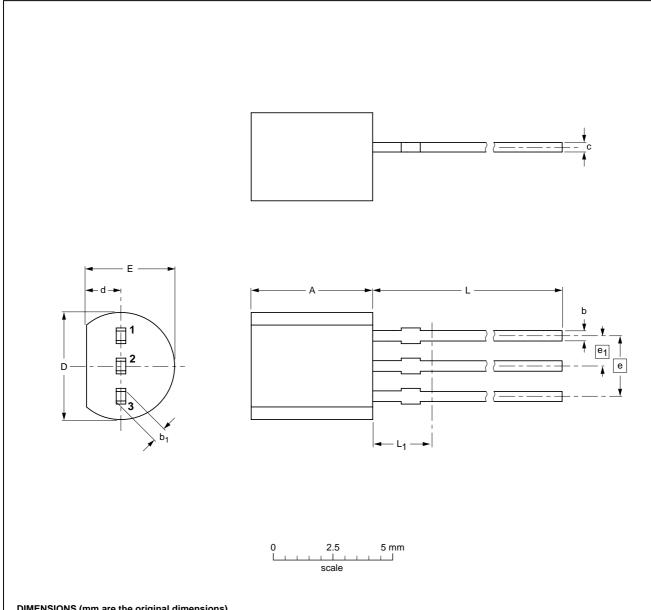
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PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; 3 leads

SOT54



DIMENSIONS (mm are the original dimensions)

UNIT	Α	b	b ₁	С	D	d	E	е	e ₁	L	L ₁ ⁽¹⁾
mm	5.2 5.0	0.48 0.40	0.66 0.56	0.45 0.40	4.8 4.4	1.7 1.4	4.2 3.6	2.54	1.27	14.5 12.7	2.5

Note

1. Terminal dimensions within this zone are uncontrolled to allow for flow of plastic and terminal irregularities.

OUTLINE	REFERENCES EUROPEAN ISSUE D			ISSUE DATE	
VERSION	IEC	JEDEC	EIAJ	PROJECTION	ISSUE DATE
SOT54		TO-92	SC-43		97-02-28

2001 Dec 07 4

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DATA SHEET STATUS

DATA SHEET STATUS(1)	PRODUCT STATUS ⁽²⁾	DEFINITIONS
Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
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NOTES

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NOTES

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